

**Appendix A: List of Claims**

1-31. (Cancelled)

32. (Original) A composition, comprising:  
a compound having a structure:





comprising an organic moiety, Q being one of nitrogen or oxygen, and Y being one of H or SiR<sub>3</sub>, each R independently being one of hydrogen and an organic moiety, wherein at least a portion of the compound is able to cyclize upon reaction of the compound with an electrophile able to transform OY into an alkylating agent.

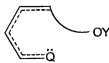
33. (Original) The composition of claim 32, wherein the electrophile comprises a phosphate ester.
34. (Original) The composition of claim 32, wherein the electrophile comprises an electrophilic phosphorous, sulfur, or arsenic atom.
35. (Original) The composition of claim 34, wherein the electrophilic phosphorous, sulfur, or arsenic atom is bonded to more than one electron-withdrawing moiety.
36. (Original) The composition of claim 32, wherein the electrophile comprises an electrophilic carbon that is multiply-bonded another electrophilic atom.
37. (Original) The composition of claim 32, wherein the electrophile is a chemical warfare agent.



38. (Original) The composition of claim 32, wherein  $\ddot{Q}$  is nitrogen.
39. (Original) The composition of claim 32, wherein  $\ddot{Q}$  is oxygen.
40. (Original) The composition of claim 32, wherein the compound is a polymer.
41. (Original) The composition of claim 32, wherein a shortest bond path between O and  $\ddot{Q}$  has at least 5 atoms.
42. (Original) The composition of claim 41, wherein a shortest bond path between O and  $\ddot{Q}$  has exactly 5 atoms.
43. (Original) The composition of claim 32, wherein the compound is able to cyclize upon reaction of the compound with the electrophile to produce a product having a structure:




44. (Original) The composition of claim 32, wherein  comprises at least one conjugated group.


45. (Original) The composition of claim 32, wherein  $\ddot{Q}$   has a structure:




wherein the structure  comprises at least one conjugated group, and  comprises at least one carbon atom.

46. (Original) The composition of claim 45, wherein  comprises a structure:




47. (Original) The composition of claim 45, wherein  consists of a structure:



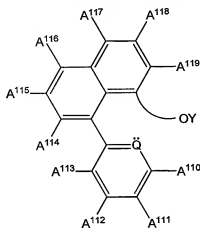
48. (Original) The composition of claim 45, wherein the structure  comprises at least two conjugated groups.

49. (Original) The composition of claim 48, wherein the two conjugated groups are not conjugated with each other.

50. (Original) The composition of claim 48, wherein the two conjugated groups are phenolic groups.

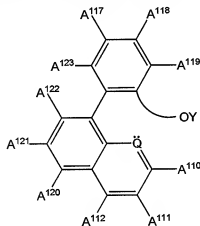
51. (Original) The composition of claim 48, wherein the structure  comprises at least three conjugated groups.

52. (Original) The composition of claim 45, wherein the compound comprises a structure:



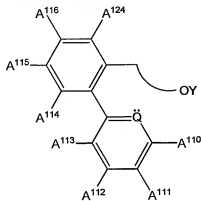
wherein at least one or more of  $A^{110}$ ,  $A^{111}$ ,  $A^{112}$ ,  $A^{113}$ ,  $A^{114}$ ,  $A^{115}$ ,  $A^{116}$ ,  $A^{117}$ ,  $A^{118}$ , and  $A^{119}$  is one of hydrogen, an organic moiety, or a polymer.

53. (Original) The composition of claim 45, wherein the compound comprises a structure:



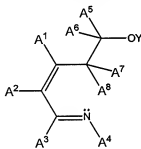
wherein at least one or more of  $A^{110}$ ,  $A^{111}$ ,  $A^{112}$ ,  $A^{117}$ ,  $A^{118}$ ,  $A^{119}$ ,  $A^{120}$ ,  $A^{121}$ ,  $A^{122}$ , and  $A^{123}$  is one of hydrogen, an organic moiety, or a polymer.

54. (Original) The composition of claim 45, wherein the compound comprises a structure:



wherein at least one or more of A<sup>110</sup>, A<sup>111</sup>, A<sup>112</sup>, A<sup>113</sup>, A<sup>114</sup>, A<sup>115</sup>, A<sup>116</sup> and A<sup>124</sup> is one of hydrogen, an organic moiety, or a polymer.

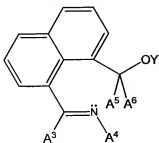
55. (Original) The composition of claim 32, wherein the compound has a structure:



wherein at least one or more of A<sup>1</sup>, A<sup>2</sup>, A<sup>3</sup>, A<sup>4</sup>, A<sup>5</sup>, A<sup>6</sup>, A<sup>7</sup>, and A<sup>8</sup> comprises at least one conjugated group.

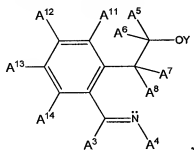
56. (Original) The composition of claim 55, wherein each of A<sup>5</sup>, A<sup>6</sup>, A<sup>7</sup>, and A<sup>8</sup> independently is hydrogen.

57. (Original) The composition of claim 55, wherein the compound has a structure:



58. (Original) The composition of claim 57, wherein each of A<sup>3</sup> and A<sup>6</sup> independently is hydrogen.
59. (Original) The composition of claim 57, wherein A<sup>3</sup> and A<sup>4</sup> together comprise a conjugated group.
60. (Original) The composition of claim 59, wherein the conjugated group is cyclic.
61. (Original) The composition of claim 60, wherein the conjugated group is aromatic.
62. (Original) The composition of claim 55, wherein A<sup>1</sup> and A<sup>2</sup> together comprise a conjugated group.
63. (Original) The composition of claim 62, wherein the conjugated group is cyclic.

64. (Original) The composition of claim 55, wherein the compound has a structure:

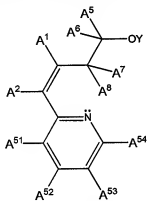


wherein each of A<sup>11</sup>, A<sup>12</sup>, A<sup>13</sup>, and A<sup>14</sup> independently comprise at least one atom.

65. (Original) The composition of claim 64, wherein at least one of A<sup>11</sup>, A<sup>12</sup>, A<sup>13</sup>, and A<sup>14</sup> comprises a conjugated group.

66-80. (Cancelled)

81. (Original) The composition of claim 55, wherein the compound has a structure:



wherein each of A<sup>51</sup>, A<sup>52</sup>, A<sup>53</sup>, and A<sup>54</sup> independently comprise at least one atom.

82-126. (Cancelled)

127. (Original) A method, comprising:

reacting a compound with an electrophile to produce a product having greater

emissivity than the compound, wherein the product comprises at least a portion of the compound that has been cyclized upon reaction with the electrophile.

128. (Original) A method, comprising:

cyclizing at least a portion of a compound by reacting the compound with an electrophile, the compound having a structure:



comprising an organic moiety, Q being one of nitrogen or oxygen, and Y being one of H, an alkyl group, an alkoxy group, and SiR<sub>3</sub>, each R independently being one of hydrogen and an organic moiety.

129-135. (Cancelled)